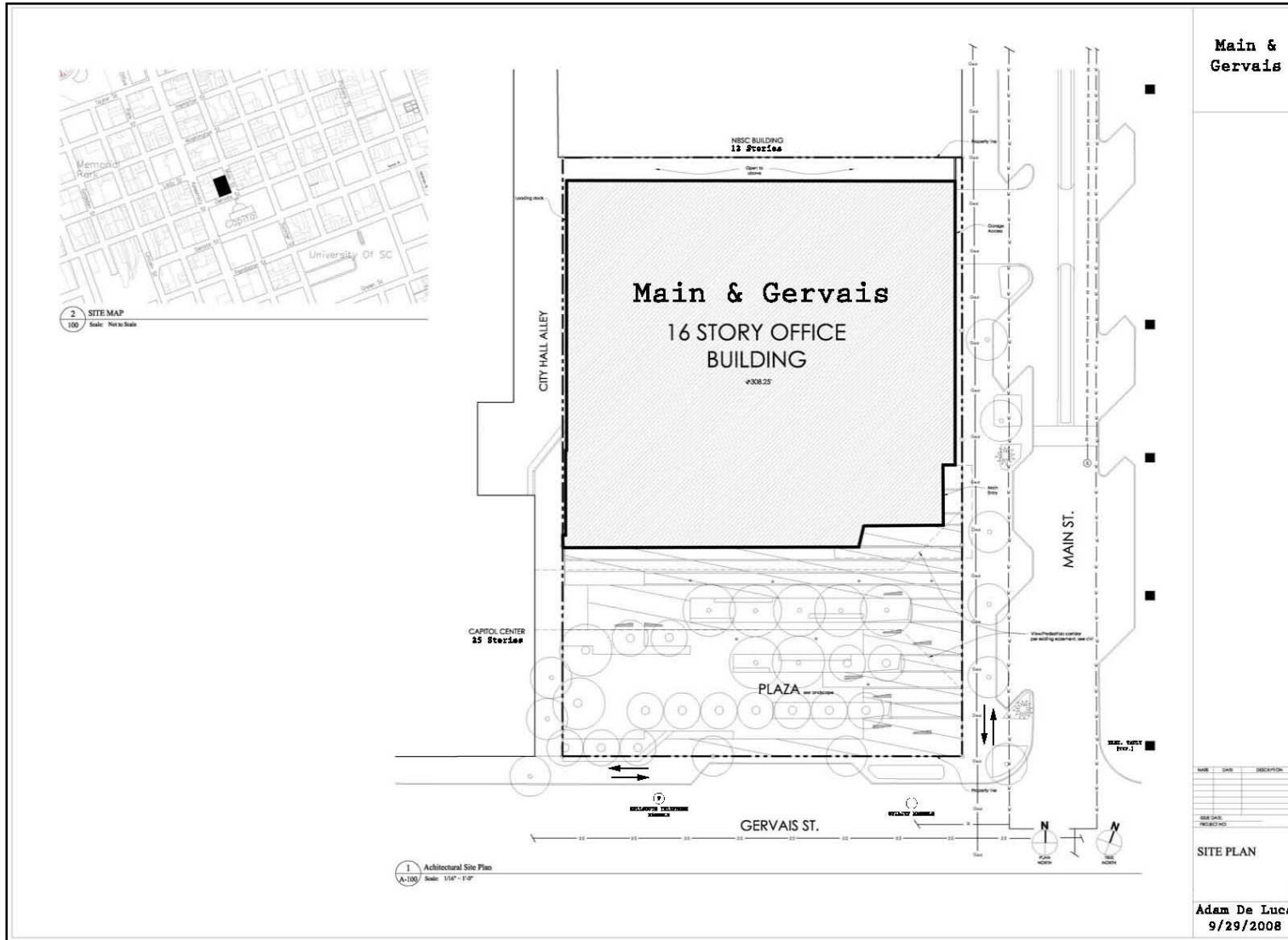
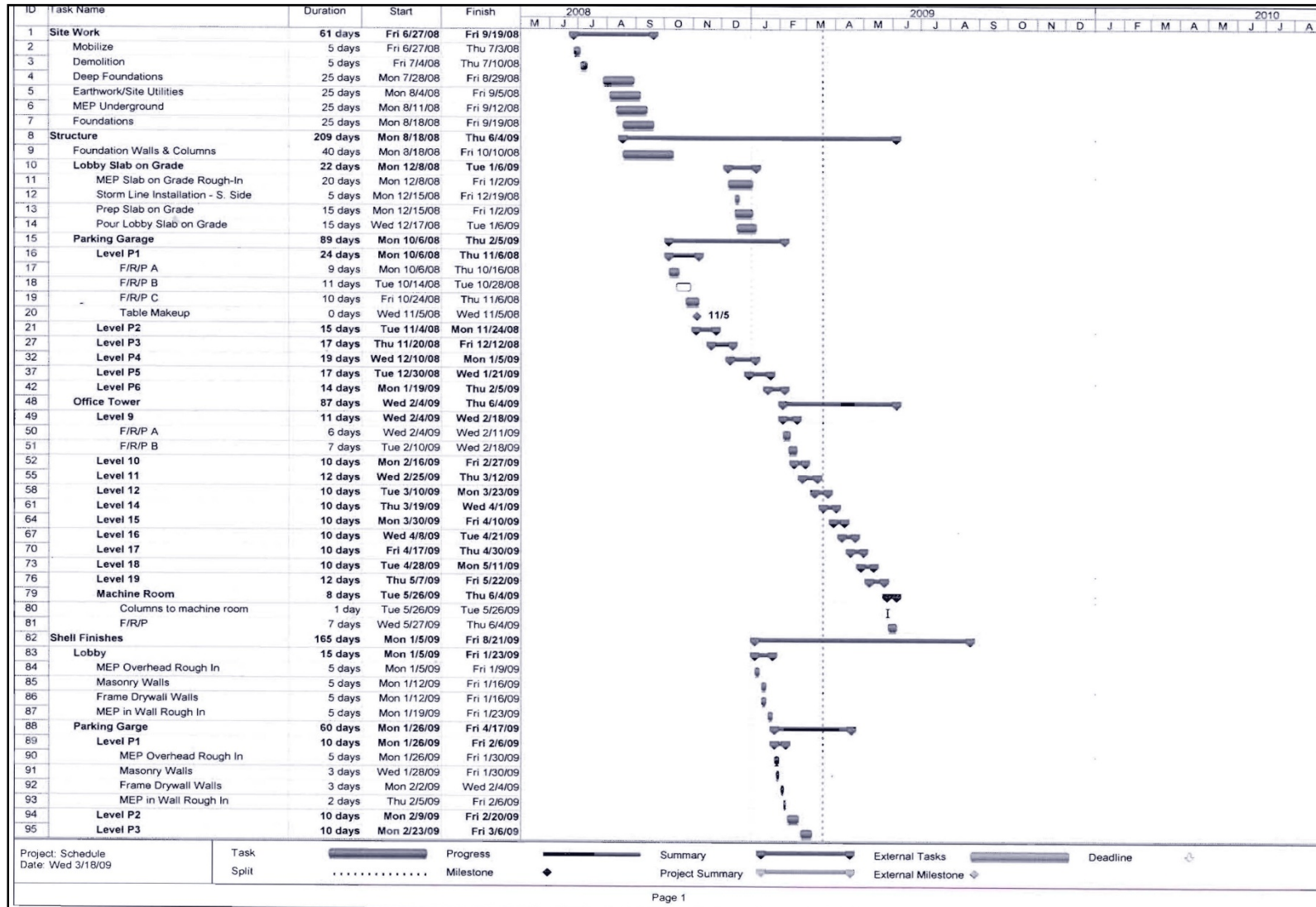


Appendix A: Site Plan



Appendix B: Project Schedule



Appendix C: General Conditions Estimate

Staffing			
Position	Unit (week)	Labor Cost	Total Cost
Project Manager	78	\$ 2,100.00	\$ 163,800.00
Project Engineer (2)	156	\$ 1,005.00	\$ 52,260.00
Superintendent	78	\$ 1,950.00	\$ 101,400.00
Field Engineer (2)	156	\$ 1,300.00	\$ 67,600.00
Layout Crew	8	\$ 4,788.00	\$ 38,304.00
Clerk	78	\$ 365.00	\$ 18,980.00
Total			\$ 442,344.00

Office Support			
Materials	Unit (month)	Material Cost	Total Cost
Rented Office Space	18	\$ 1,565.00	\$ 28,170.00
Office Supplies	18	\$ 95.00	\$ 1,710.00
Telephone	18	\$ 210.00	\$ 3,780.00
Storage	18	\$ 147.00	\$ 2,646.00
Office Equipment	18	\$ 150.00	\$ 2,700.00
Total			\$ 39,006.00

Material Hoists			
Equipment	Unit (month)	Labor/Equip. Cost	Total Cost
Tower Crane	13	\$ 28,800.00	\$ 374,400.00
Mobile Crane (100 ton)	3	\$ 3,985.00	\$ 358,650.00
All-Terrain Forklift	13	\$ 3,675.00	\$ 47,775.00
Total			\$ 780,825.00

Temporary Utilities			
Utility	Time	Unit Cost/CSF	Total Cost
Heat (winter months)	5 Months	\$ 13.50	\$ 54,391.50
Lighting (interior const.)	7 Months	\$ 13.33	\$ 53,706.57
Power	7 Months	\$ 47.00	\$ 189,363.00
Total			\$ 297,461.07

Miscellaneous Items			
Equipment	Unit	Unit Cost	Total Cost
Temporary Fencing	932 LF	\$ 3.00	\$ 2,796.00
Quality Control Testing	Project	\$ 48,182.00	\$ 48,182.00
Permits	Project	2.00%	\$ 823,020.00
Total			\$ 873,998.00

Insurance and Fees			
Item	Unit	Unit Cost	Total Cost
Contractors Fee	Project	4.00%	\$ 1,646,040.00
All-Risk Insurance	Project	0.62%	\$ 255,136.20
Total			\$ 1,901,176.20

General Conditions Total	\$ 4,302,266.24
---------------------------------	------------------------

Appendix D: Structural Estimate

03 11 13 Forms In Place							
Description	Quantity	Unit	Material	Labor	Equipment	Cost/Unit	Total
Pile Caps	7722	SFCA	\$ 0.86	\$ 3.02		\$ 3.88	\$ 23,669.47
Joists	124320	SFCA	\$ 0.89	\$ 4.51		\$ 5.40	\$ 530,349.12
Beams	137760	SFCA	\$ 0.89	\$ 4.51		\$ 5.40	\$ 587,684.16
Girders	114240	SFCA	\$ 0.88	\$ 5.50		\$ 6.38	\$ 575,792.45
Columns	69120	SFCA	\$ 0.78	\$ 4.72		\$ 5.50	\$ 300,326.40
Slab on Grade	756	LF	\$ 0.32	\$ 1.93		\$ 2.25	\$ 1,343.79
Elevated Slabs	403314	SF	\$ 1.42	\$ 3.18		\$ 4.60	\$ 1,465,643.08
Total							\$ 3,484,808.47

03 21 10 Reinforcing In Place							
Description	Quantity	Unit	Material	Labor	Equipment	Cost/Unit	Total
Beams & Girders, #8 to #18	1410	tons	\$ 980.00	\$ 520.00		\$ 1,500.00	\$ 1,670,850.00
Columns, #8 to #18	198	tons	\$ 980.00	\$ 600.00		\$ 1,580.00	\$ 247,143.60
Slab on Grade, #3 to #7	41	tons	\$ 940.00	\$ 660.00		\$ 1,600.00	\$ 51,824.00
Elevated Slabs, #4 to #7	383	tons	\$ 1,020.00	\$ 480.00		\$ 1,500.00	\$ 453,855.00
Total							\$ 2,423,672.60

03 23 05 Prestressing Tendons							
Description	Quantity	Unit	Material	Labor	Equipment	Cost/Unit	Total
Post-tensioned, 50' span, 300 kip	242	tons	\$ 1,820.00	\$ 1,860.00	\$ 80.00	\$ 3,760.00	\$ 718,836.80
Total							\$ 718,836.80

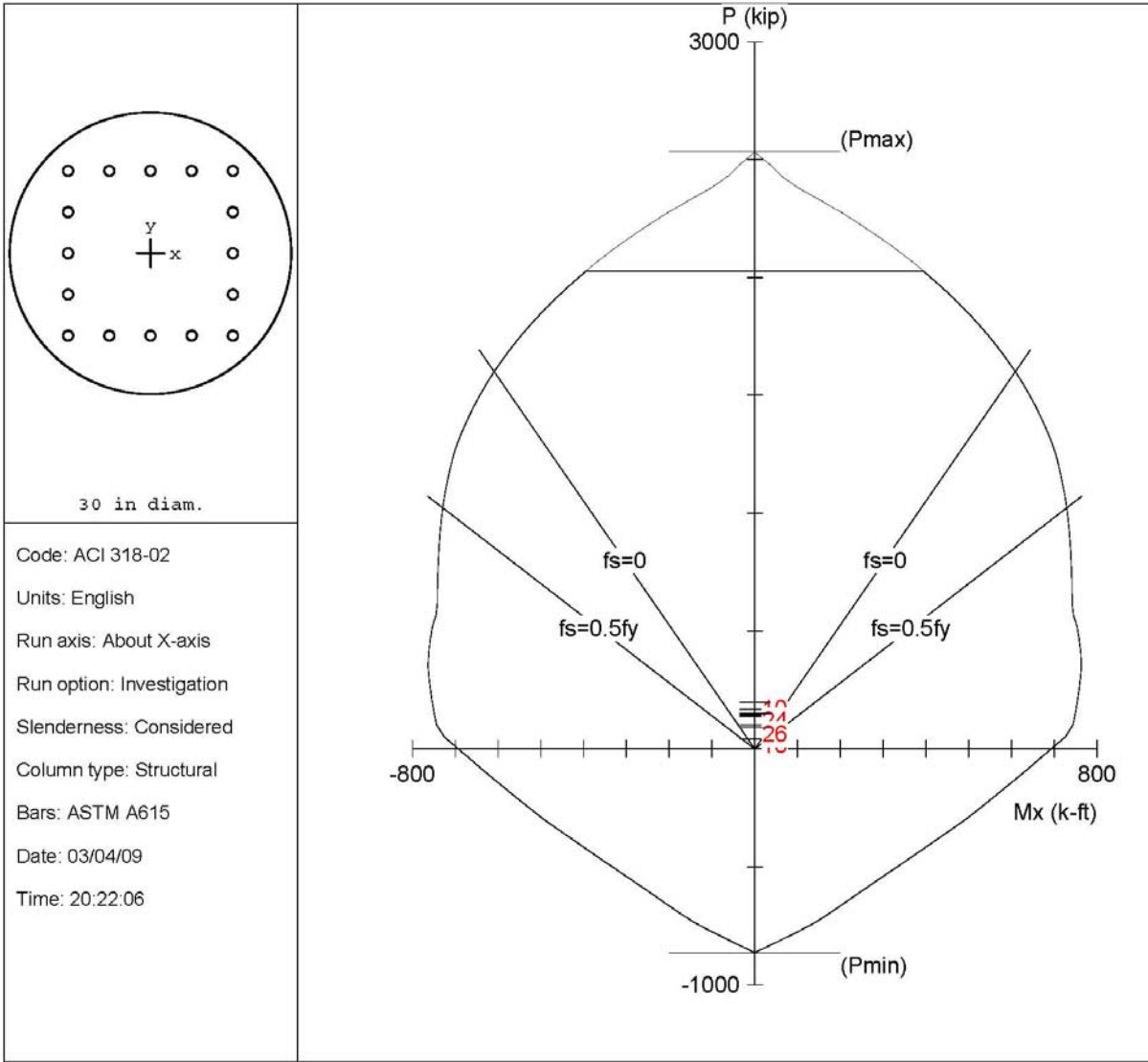
03 31 05 Placing Concrete							
Description	Quantity	Unit	Material	Labor	Equipment	Cost/Unit	Total
Pile Caps, pumped	787	CY		\$ 12.80	\$ 6.40	\$ 19.20	\$ 11,937.22
Joists, crane & bucket	2302	CY		\$ 52.50	\$ 26.50	\$ 79.00	\$ 143,667.82
Beams, "	2551	CY		\$ 52.50	\$ 26.50	\$ 79.00	\$ 159,207.91
Girders, "	2116	CY		\$ 36.50	\$ 18.30	\$ 54.80	\$ 91,605.87
Columns, "	2296	CY		\$ 23.50	\$ 11.90	\$ 35.40	\$ 64,209.94
Slab on Grade, pumped	551	CY		\$ 16.00	\$ 6.00	\$ 22.00	\$ 9,576.38
Elevated Slab, crane & bucket	8714	CY		\$ 21.50	\$ 10.80	\$ 32.30	\$ 222,355.14
Total							\$ 702,560.27

03 31 05 Normal Weight Concrete							
Description	Quantity	Unit	Material	Labor	Equipment	Cost/Unit	Total
5000 psi	9265	CY	\$ 109.00			\$ 109.00	\$ 797,809.15
6000 psi	6969	CY	\$ 124.00			\$ 124.00	\$ 682,683.24
8000 psi	3083	CY	\$ 203.00			\$ 203.00	\$ 494,420.71
Total							\$ 1,974,913.10

31 62 13 Concrete Piles							
Description	Quantity	Unit	Material	Labor	Equipment	Cost/Unit	Total
Prestressed Concrete Piles, d=18"	25650	V.L.F.	\$ 35.00	\$ 4.06	\$ 3.76	\$ 42.82	\$ 867,683.07
Total							\$867,683.07

Grand Total	\$ 10,172,474.31
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Appendix E: Column Loading Results (pcaColumn)



pcaColumn v3.64. Licensed to: Penn State University. License ID: 52411-1010265-4-22545-28F4D

File: P:\Thesis\Curtain Wall Analysis\Column Load Analysis\5000.col

Project: Main & Gervais

Column: A5

Engineer: Adam

$f_c = 5$ ksi

$f_y = 60$ ksi

$A_g = 706.858$ in²

16 #9 bars

$E_c = 4031$ ksi

$E_s = 29000$ ksi

$A_s = 16.00$ in²

Rho = 2.26%

$f_c = 4.25$ ksi

$f_c = 4.25$ ksi

$X_o = 0.00$ in

$I_x = 39760.8$ in⁴

$e_u = 0.003$ in/in

$Y_o = 0.00$ in

$I_y = 39760.8$ in⁴

Beta1 = 0.8

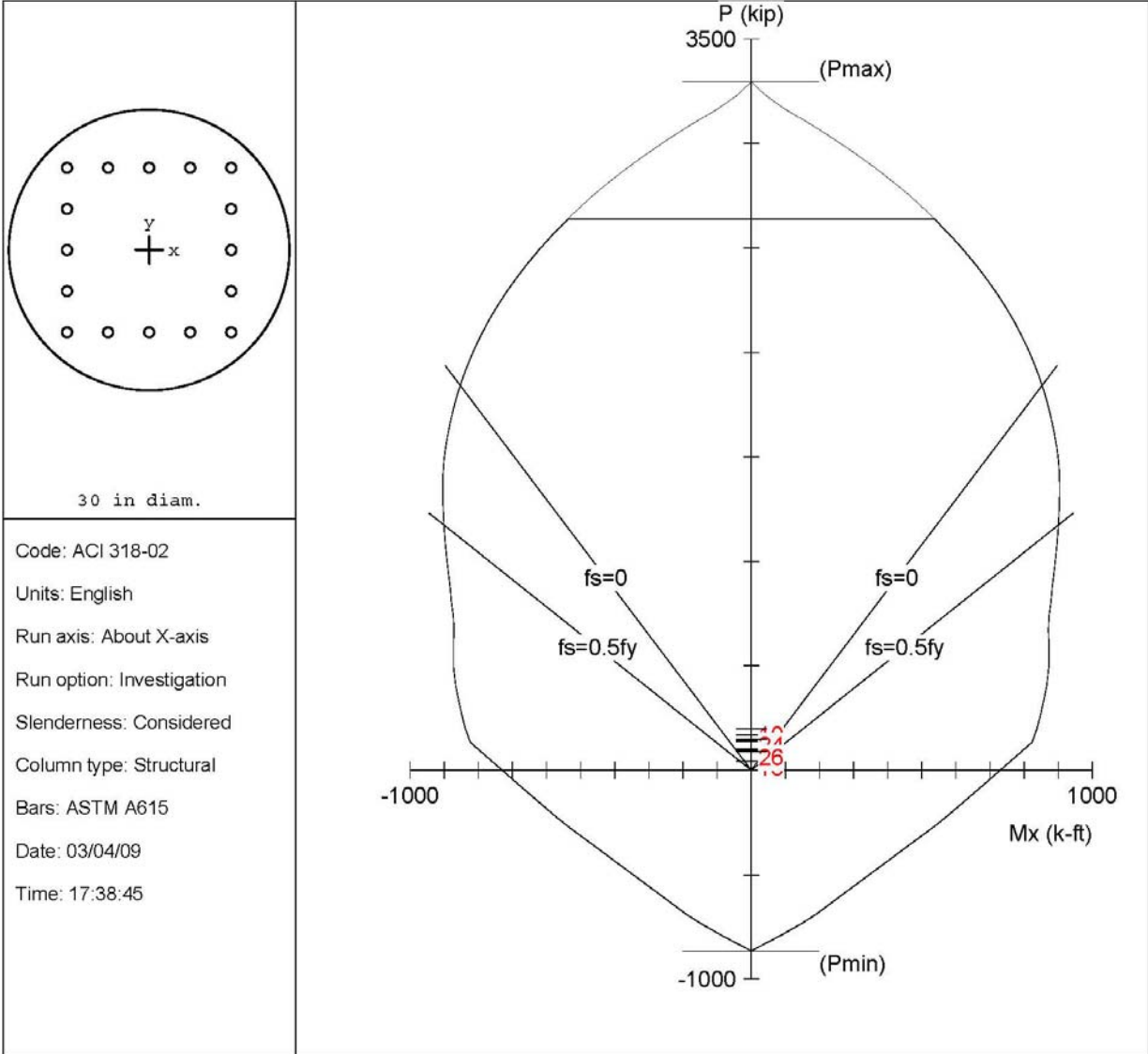
Clear spacing = 3.31 in

Clear cover = 1.88 in

Confinement: Tied

$\phi(a) = 0.8, \phi(b) = 0.9, \phi(c) = 0.65$

$k_x(\text{braced}) = 1, k_x(\text{sway}) = \text{N/A}$



pcaColumn v3.64. Licensed to: Penn State University. License ID: 52411-1010265-4-22545-28F4D

File: P:\Thesis\Curtain Wall Analysis\Column Load Analysis\7000.col

Project: Main & Gervais

Column: A5

Engineer: Adam

$f_c = 7$ ksi

$f_y = 60$ ksi

$A_g = 706.858$ in²

16 #9 bars

$E_c = 4769$ ksi

$E_s = 29000$ ksi

$A_s = 16.00$ in²

Rho = 2.26%

$f_c = 5.95$ ksi

$f_c = 5.95$ ksi

$X_o = 0.00$ in

$I_x = 39760.8$ in⁴

$e_u = 0.003$ in/in

$Y_o = 0.00$ in

$I_y = 39760.8$ in⁴

Beta1 = 0.7

Clear spacing = 3.31 in

Clear cover = 1.88 in

Confinement: Tied

$\phi(a) = 0.8, \phi(b) = 0.9, \phi(c) = 0.65$

$k_x(\text{braced}) = 1, k_x(\text{sway}) = \text{N/A}$

Appendix F: Strip Wizard Input (RAM Concept)

Strip Wizard

General Parameters

Specify the structural system, number of spans and the materials.

Structure Type

Structural system: Beam

Post-Tensioned

Spans

Number of Spans (excluding cantilevers): 3

Cantilevers: Start End

Asymmetric strip

Concrete Mixes

Slabs and Beams: 5000 psi

Support: 6000 psi

< Back Next > Cancel

Strip Wizard

Span Data - Beams

Specify the structural system span data.

Beam Systems

	Length (feet)	W Depth (inches)	W Width (inches)	F Depth (inches)	F Start Width (feet)	F End Width (feet)
Typical						
Span 1	45	26	36	5	10	10
Span 2	30	26	36	5	10	10
Span 3	45	26	36	5	10	10

< Back Next > Cancel

Strip Wizard

Support Data

Specify the structural system support data.

Supports Above

	Depth (inches)	Width (inches)	Height (feet)	Bottom Fixity	Top Fixity
Typical				Fixed	Fixed
Support 1	19		0	13 Fixed	Fixed
Support 2	19		0	13 Fixed	Fixed
Support 3	19		0	13 Fixed	Fixed
Support 4	19		0	13 Fixed	Fixed

Supports Below

	Depth (inches)	Width (inches)	Height (feet)	Bottom Fixity	Top Fixity
Typical				Fixed	Fixed
Support 1	19		0	13 Fixed	Fixed
Support 2	19		0	13 Fixed	Fixed
Support 3	19		0	13 Fixed	Fixed
Support 4	19		0	13 Fixed	Fixed

< Back Next > Cancel

Strip Wizard

Loads

Specify the loads.

Loads

	Dead Area Load (psf)	Dead Line Load (kips/ft)	Live Area Load (psf)	Live Line Load (kips/ft)
Typical				
Span 1	63	0.315	120	0.6
Span 2	63	0.315	120	0.6
Span 3	63	0.315	120	0.6

Loadings to Use

"Dead": "Live":

< Back Next > Cancel

Strip Wizard

Post-Tensioning

Specify the PT system, stressing locations and the required precompression.

PT System:

Stressing: Start End

Min P/A: psi

Balance Load

Min balance load percentage: %

Balance load considers:

Profiling

Straight profile distance at supports: inches

Round profiles to nearest: inches

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Strip Wizard

Reinforcement

Specify the reinforcement parameters.

Reinforcing Bar

Top:

Bottom:

Shear:

Reinforcement Clear Cover

Top: inches

Bottom: inches

Punching Shear Checks

Perform punching shear checks

Cover to CGS: inches

< Back Next > Cancel

Appendix G: Solar Radiation Hand Calculations

WINDOW HEAT GAIN ANALYSIS

May 21 - 3pm 2009

SLOPED

$$G_{ND} = \frac{A}{\exp(B/\sin \beta)} C_N$$

$$G_{ND} = \frac{350.6}{\exp(0.177/\sin 64.12)} (0.94)$$

$$G_{ND} = 270.71$$

$$G_D = G_{ND} \cos \theta$$

$$G_D = (270.71)(0.487)$$

$$G_D = 131.84$$

$$F_{ws} = \frac{1 + \cos \alpha}{2} = \frac{1 + \cos(95.63)}{2}$$

$$= 0.451$$

$$F_{wg} = \frac{1 - \cos \alpha}{2} = \frac{1 - \cos(95.63)}{2}$$

$$= 0.549$$

$$G_t = [\cos \theta + C F_{ws} + p_g F_{wg} (\sin \beta + C)] G_{ND}$$

$$= [0.242 + (0.13)(0.451) + (0.32)(0.549)(\sin(64.12) + 0.13)] (270.71)$$

$$= 0.459 (270.71)$$

$$= 124.22 \text{ Btu/hr-ft}^2$$

$$q = SHGC(G_t) = 0.278 (124.22) = 34.53 \text{ Btu/hr-ft}^2$$

VERTICAL

$$\frac{G_{dv}}{G_{dh}} = 0.55 + 0.437 \cos \theta + 0.313 \cos^2 \theta$$

$$= 0.73$$

$$G_{dv}/G_{dh} = 0.55 + 0.437 \cos \theta + 0.313 \cos^2 \theta$$

$$= 0.73$$

$$G_t = [\cos \theta + \frac{G_{dv}}{G_{dh}} C + p_g F_{wg} (\sin \beta + C)] G_{ND}$$

$$= [0.332 + (0.73)(0.13) + (0.32)(0.5)(\sin(64.12) + 0.13)] (270.71)$$

$$= 0.571 (270.71)$$

$$= 154.58 \text{ Btu/hr-ft}^2$$

$$q = SHGC(G_t) = 0.278 (154.88) = 43.057 \text{ Btu/hr-ft}^2$$

% Diff = $\frac{12 - 34.5}{34.5} \times 100 = 25\%$ increase for this hour

Appendix H: Sloped Façade Solar Radiation Calculation Tables

May 21 - Solar Data			
A	B	C	C _N
350.6	0.177	0.13	0.94

SLOPED WALL															
Date	Time	β (Altitude)	φ_z (Azimuth)	G _{nd}	φ	Ψ	γ	α	cos θ	F _{ws}	F _{wg}	N/A	G _t (btu/hr-ft ²)	SHGC	Window Heat Gain (btu/hr-ft ²)
21-May	12:00	76.1	0	274.63	360.00	255.00	105.00	95.63	-0.16	0.45	0.55		19.82	0.278	5.51
21-May	13:00	70.78	-47.57	273.23	312.43	255.00	57.43	95.63	0.08	0.45	0.55		84.26	0.278	23.42
21-May	14:00	60.05	-70.14	268.67	289.86	255.00	34.86	95.63	0.32	0.45	0.55		143.40	0.278	39.86
21-May	15:00	47.97	-82.62	259.69	277.38	255.00	22.38	95.63	0.54	0.45	0.55		190.26	0.278	52.89
21-May	16:00	35.57	-91.61	243.10	268.39	255.00	13.39	95.63	0.73	0.45	0.55		216.74	0.278	60.25
21-May	17:00	23.21	-99.37	210.32	260.63	255.00	5.63	95.63	0.87	0.45	0.55		210.28	0.278	58.46
21-May	18:00	11.11	-106.92	131.53	253.08	255.00	1.92	95.63	0.96	0.45	0.55		138.10	0.278	38.39
Total btu/ft²/day														278.792	

June 21 - Solar Data			
A	B	C	C _N
346.1	0.185	0.137	0.94

SLOPED WALL															
Date	Time	β (Altitude)	φ_z (Azimuth)	G _{nd}	φ	Ψ	γ	α	cos θ	F _{ws}	F _{wg}	N/A	G _t (btu/hr-ft ²)	SHGC	Window Heat Gain (btu/hr-ft ²)
21-Jun	12:00	79.43	0	269.52	360.00	255.00	105.00	95.63	-0.14	0.45	0.55		24.50	0.278	6.81
21-Jun	13:00	73.16	-55.06	268.15	304.94	255.00	49.94	95.63	0.09	0.45	0.55		86.27	0.278	23.98
21-Jun	14:00	61.78	-75.97	263.72	284.03	255.00	29.03	95.63	0.33	0.45	0.55		142.89	0.278	39.72
21-Jun	15:00	49.49	-87.08	255.07	272.92	255.00	17.92	95.63	0.54	0.45	0.55		187.76	0.278	52.20
21-Jun	16:00	37.06	-95.26	239.34	264.74	255.00	9.74	95.63	0.72	0.45	0.55		213.39	0.278	59.32
21-Jun	17:00	24.79	-102.53	209.27	257.47	255.00	2.47	95.63	0.86	0.45	0.55		208.71	0.278	58.02
21-Jun	18:00	12.85	-109.76	141.60	250.24	255.00	4.76	95.63	0.95	0.45	0.55		148.16	0.278	41.19
Total btu/ft²/day														281.25	

July 21 - Solar Data			
A	B	C	C _N
346.4	0.186	0.138	0.94

SLOPED WALL															
Date	Time	β (Altitude)	ϕ_z (Azimuth)	G _{nd}	ϕ	Ψ	γ	α	cos θ	F _{ws}	F _{wg}	N/A	G _t (btu/hr-ft ²)	SHGC	Window Heat Gain (btu/hr-ft ²)
21-Jul	12:00	76.55	0	268.94	360.00	255.00	105.00	95.63	-0.16	0.45	0.55		20.95	0.278	5.82
21-Jul	13:00	71.1	-48.43	267.50	311.57	255.00	56.57	95.63	0.08	0.45	0.55		83.83	0.278	23.30
21-Jul	14:00	60.28	-70.83	262.84	289.17	255.00	34.17	95.63	0.32	0.45	0.55		141.42	0.278	39.31
21-Jul	15:00	48.16	-83.14	253.68	276.86	255.00	21.86	95.63	0.54	0.45	0.55		186.81	0.278	51.93
21-Jul	16:00	35.75	-92.03	236.83	267.97	255.00	12.97	95.63	0.73	0.45	0.55		211.96	0.278	58.92
21-Jul	17:00	23.38	-99.71	203.77	260.29	255.00	5.29	95.63	0.87	0.45	0.55		204.38	0.278	56.82
21-Jul	18:00	11.29	-107.22	125.92	252.78	255.00	2.22	95.63	0.96	0.45	0.55		132.60	0.278	36.86
														Total btu/ft²/day	272.98

Aug 21 - Solar Data			
A	B	C	C _N
350.9	0.182	0.134	0.94

SLOPED WALL															
Date	Time	β (Altitude)	ϕ_z (Azimuth)	G _{nd}	ϕ	Ψ	γ	α	cos θ	F _{ws}	F _{wg}	N/A	G _t (btu/hr-ft ²)	SHGC	Window Heat Gain (btu/hr-ft ²)
21-Aug	12:00	68.25	0	271.15	360.00	255.00	105.00	95.63	-0.19	0.45	0.55		10.09	0.278	2.80
21-Aug	13:00	64.3	-35.69	269.52	324.31	255.00	69.31	95.63	0.06	0.45	0.55		76.27	0.278	21.20
21-Aug	14:00	55.09	-58.64	264.20	301.36	255.00	46.36	95.63	0.31	0.45	0.55		136.68	0.278	38.00
21-Aug	15:00	43.72	-73.01	253.48	286.99	255.00	31.99	95.63	0.54	0.45	0.55		183.61	0.278	51.04
21-Aug	16:00	31.55	-83.38	232.94	276.62	255.00	21.62	95.63	0.74	0.45	0.55		207.27	0.278	57.62
21-Aug	17:00	19.13	-92.03	189.29	267.97	255.00	12.97	95.63	0.88	0.45	0.55		189.76	0.278	52.75
21-Aug	18:00	6.77	-100.13	70.44	259.87	255.00	4.87	95.63	0.97	0.45	0.55		74.29	0.278	20.65
														Total btu/ft²/day	244.07

Appendix I: Vertical Façade Solar Radiation Calculation Tables

May 21 - Solar Data			
A	B	C	C _N
350.6	0.177	0.13	0.94

VERTICAL WALL															
Date	Time	β (Altitude)	ϕ_z (Azimuth)	G _{nd}	ϕ	Ψ	γ	α	cos θ	N/A	F _{wg}	G _{dv} /G _{dth}	G _t (btu/hr-ft ²)	SHGC	Window Heat Gain (btu/hr-ft ²)
21-May	12:00	76.1	0	274.63	360.00	255.00	105.00	90.00	-0.06		0.50	0.52	44.31	0.278	12.32
21-May	13:00	70.78	-47.57	273.23	312.43	255.00	57.43	90.00	0.18		0.50	0.64	112.37	0.278	31.24
21-May	14:00	60.05	-70.14	268.67	289.86	255.00	34.86	90.00	0.41		0.50	0.78	174.66	0.278	48.55
21-May	15:00	47.97	-82.62	259.69	277.38	255.00	22.38	90.00	0.62		0.50	0.94	223.45	0.278	62.12
21-May	16:00	35.57	-91.61	243.10	268.39	255.00	13.39	90.00	0.79		0.50	1.09	249.57	0.278	69.38
21-May	17:00	23.21	-99.37	210.32	260.63	255.00	5.63	90.00	0.91		0.50	1.21	238.83	0.278	66.39
21-May	18:00	11.11	-106.92	131.53	253.08	255.00	1.92	90.00	0.98		0.50	1.28	154.97	0.278	43.08
Total btu/ft²/day															333.09

June 21 - Solar Data			
A	B	C	C _N
346.1	0.185	0.137	0.94

VERTICAL WALL															
Date	Time	β (Altitude)	ϕ_z (Azimuth)	G _{nd}	ϕ	Ψ	γ	α	cos θ	N/A	F _{wg}	G _{dv} /G _{dth}	G _t (btu/hr-ft ²)	SHGC	Window Heat Gain (btu/hr-ft ²)
21-Jun	12:00	79.43	0	269.52	360.00	255.00	105.00	90.00	-0.05		0.50	0.53	49.18	0.278	13.67
21-Jun	13:00	73.16	-55.06	268.15	304.94	255.00	49.94	90.00	0.19		0.50	0.64	114.69	0.278	31.88
21-Jun	14:00	61.78	-75.97	263.72	284.03	255.00	29.03	90.00	0.41		0.50	0.78	174.60	0.278	48.54
21-Jun	15:00	49.49	-87.08	255.07	272.92	255.00	17.92	90.00	0.62		0.50	0.94	221.58	0.278	61.60
21-Jun	16:00	37.06	-95.26	239.34	264.74	255.00	9.74	90.00	0.79		0.50	1.09	247.04	0.278	68.68
21-Jun	17:00	24.79	-102.53	209.27	257.47	255.00	2.47	90.00	0.91		0.50	1.20	238.44	0.278	66.29
21-Jun	18:00	12.85	-109.76	141.60	250.24	255.00	4.76	90.00	0.97		0.50	1.27	167.31	0.278	46.51
Total btu/ft²/day															337.17

July 21 - Solar Data			
A	B	C	C _N
346.4	0.186	0.138	0.94

VERTICAL WALL															
Date	Time	β (Altitude)	φ_z (Azimuth)	G _{nd}	φ	Ψ	γ	α	cos θ	N/A	F _{wg}	G _{dv} /G _{dh}	G _t (btu/hr-ft ²)	SHGC	Window Heat Gain (btu/hr-ft ²)
21-Jul	12:00	76.55	0	268.94	360.00	255.00	105.00	90.00	-0.06		0.50	0.52	45.16	0.278	12.55
21-Jul	13:00	71.1	-48.43	267.50	311.57	255.00	56.57	90.00	0.18		0.50	0.64	111.81	0.278	31.08
21-Jul	14:00	60.28	-70.83	262.84	289.17	255.00	34.17	90.00	0.41		0.50	0.78	172.75	0.278	48.02
21-Jul	15:00	48.16	-83.14	253.68	276.86	255.00	21.86	90.00	0.62		0.50	0.94	220.28	0.278	61.24
21-Jul	16:00	35.75	-92.03	236.83	267.97	255.00	12.97	90.00	0.79		0.50	1.09	245.19	0.278	68.16
21-Jul	17:00	23.38	-99.71	203.77	260.29	255.00	5.29	90.00	0.91		0.50	1.21	233.30	0.278	64.86
21-Jul	18:00	11.29	-107.22	125.92	252.78	255.00	2.22	90.00	0.98		0.50	1.28	149.60	0.278	41.59
Total btu/ft²/day														327.51	

Aug 21 - Solar Data			
A	B	C	C _N
350.9	0.182	0.134	0.94

VERTICAL WALL															
Date	Time	β (Altitude)	φ_z (Azimuth)	G _{nd}	φ	Ψ	γ	α	cos θ	F _{ws}	F _{wg}	G _{dv} /G _{dh}	G _t (btu/hr-ft ²)	SHGC	Window Heat Gain (btu/hr-ft ²)
21-Aug	12:00	68.25	0	271.15	360.00	255.00	105.00	90.00	-0.10	0.50	0.50	0.51	32.89	0.278	9.14
21-Aug	13:00	64.3	-35.69	269.52	324.31	255.00	69.31	90.00	0.15	0.50	0.50	0.62	102.74	0.278	28.56
21-Aug	14:00	55.09	-58.64	264.20	301.36	255.00	46.36	90.00	0.39	0.50	0.50	0.77	166.38	0.278	46.25
21-Aug	15:00	43.72	-73.01	253.48	286.99	255.00	31.99	90.00	0.61	0.50	0.50	0.94	215.25	0.278	59.84
21-Aug	16:00	31.55	-83.38	232.94	276.62	255.00	21.62	90.00	0.79	0.50	0.50	1.09	238.23	0.278	66.23
21-Aug	17:00	19.13	-92.03	189.29	267.97	255.00	12.97	90.00	0.92	0.50	0.50	1.22	215.15	0.278	59.81
21-Aug	18:00	6.77	-100.13	70.44	259.87	255.00	4.87	90.00	0.99	0.50	0.50	1.29	83.21	0.278	23.13
Total btu/ft²/day														292.97	